

ABSTRACT

A multistage Stirling engine 1 mounted on an automobile provided with an internal combustion engine has two cylinders 4 and 5. Displacer pistons 6 and 7 and power pistons 8 and 9 are slidably fitted in the two cylinders 4 and 5, respectively. The exhaust gas discharged from the internal combustion engine and serving as a heating fluid flows sequentially through the cylinders 4 and 5 to heat helium gas serving as a working fluid of the Stirling engine. The cylinders 4 and 5 are disposed parallel to each other. Heaters 16 and 17, regenerative heat exchangers 18 and 19, and coolers 20 and 21 are installed between the cylinders 4 and 5. The multistage Stirling engine is flat and compact.